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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/520,927	03/08/2000	Edward J. Cleary JR.	6960 US	1687

7590 02/10/2004

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EXAMINER

YANG, RYAN R

ART UNIT	PAPER NUMBER
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2672

16

DATE MAILED: 02/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/520,927

Applicant(s)

CLEARY ET AL

Examiner

Ryan R Yang

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/21/2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 10-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Prosecution Application

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/3/2003 has been entered.
2. This action is responsive to communications: Amendment, filed on 10/3/2003. This action is non-final.
3. Claims 1-15 are pending in this application. Claim 1 is independent claims. In the Amendment, filed on 10/3/2003, claims 1-3 were amended.
4. The present title of the invention is "Surround Sound Display" as filed originally.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1-2 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson. (5,812,688).

As per claim 1, Gibson discloses a surround sound display representing a plurality of sound channels comprising:

a sound stage image (Figure 5);

a correlation meter scale for each sound channel of the sound stage image that has a corresponding sound channel to form a stereo sound source (Figure 5 X-AXIS 218); and

markers related to the correlation meter scale that represent the correlation between the corresponding sound channels (Figure 7A where the outer boundary of the sphere is the marker represents correlation between the corresponding sound channels).

Gibson discloses a surround sound display. It is noted that Gibson does not explicitly disclose "a correlation meter scale for each sound channel of the sound stage image that has a corresponding sound channel to form a stereo sound source", however, since Gibson discloses in Figure 7a "spheres corresponding to selected channels are arranged in a "V" formation (column 6, line 44-45), since the whole display is scaled by X and Y-Axis, it would have been obvious to one of ordinary skill in the art to used the scale corresponds to each sphere as corresponding correlation meter to that channel in order to measure the magnitude of the sphere.

7. As per claim 2, Gibson demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses the sound stage image comprises speaker images positioned at appropriate positions of the display to represent sound sources (Figure 4 212, 214).

8. As per claim 7, Gibson demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses the markers comprise a pointer for each sound channel, the location of the pointer along the correlation meter scale

indicating the correlation between the corresponding sound channels (Figure 8a where the edge of the sphere in the X-direction is the marker indicating correlation between the corresponding sound channels).

9. As per claim 8, Gibson demonstrated all the elements as applied to the rejection of dependent claim 7, *supra*, and further discloses the markers comprises a fill area spanning the correlation meter scales for the stereo corresponding sound channels, the width of the fill area indicating the correlation between the corresponding sound channels (Figure 8a where the sphere is solid).

10. As per claim 9, Gibson demonstrated all the elements as applied to the rejection of dependent claim 8, *supra*, and further discloses the thickness of the fill area indicates the amplitude of the stereo channels ("density of the sphere is correlated to amplitude", column 5, line 43-44).

Allowable Subject Matter

11. Claims 3-6 and 10-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed 11/21/2003 have been fully considered but they are not persuasive.

As per claim 1, Applicant alleges Gibson is not a surround sound display for it does not show a sound stage that encompasses speakers that may be behind a listener. In reply, Examiner notes that in the specification (page 6, line 16-17), Figure 1-9 are used to represent a surround sound audio program. Of these Figures, Figure 1-6 are displays representing surround sound with only two speakers. Therefore, the specification implies a surround sound system includes a two speaker system.

Applicant alleges Gibson does not show a correlation meter scale for each sound channel. In reply, Examiner notes Gibson discloses in Figure 7a "spheres corresponding to selected channels are arranged in a "V" formation (column 6, line 44-45). Since the whole display is scaled by X and Y-Axis, it would have been obvious to one of ordinary skill in the art to used the scale corresponds to each sphere as corresponding correlation meter to that channel in order to measure the magnitude of the sphere. The line shown in Figure 5 is considered scale.

Applicant alleges Gibson does not have any markers represent the correlation between the corresponding sound channels. In reply, Examiner maintains the edge of the sphere qualify as a marker.

As per claim 7-9, Applicant alleges Gibson does not show a pointer, a fill area and the thickness of the fill area indicate amplitude. In reply, Examiner notes the description of the sphere used by Gibson –

"This shape is chosen because it simply and effectively conveys visual information about the interrelationship of different sounds in the mix. The other visual characteristics of the sphere, such as size, location, texture and density are made

Art Unit: 2672

interdependent with selected audio characteristics of the source signal: size of the sphere is correlated to frequency and amplitude; x-location of the sphere is correlated to signal balance or pan control; y-location of the sphere is correlated to frequency; z-location of the sphere is correlated to volume or amplitude; texture of the sphere is correlated to certain effects and/or waveform information; and density of the sphere is correlated to amplitude. Of course, each audio signal parameter is dynamic and changes over time, and the visual images will change in accord with the correlation scheme employed", column 5, line 32-47.

Therefore, the sphere is used to indicate correlation of sounds in which the edge of the sphere is a pointer, the solid sphere is the fill and size of the sphere is the amplitude.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ryan Yang** whose telephone number is **(703) 308-6133**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:


(703) 872-9314 (for Technology Center 2600 only)

Art Unit: 2672

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-47000377.

Ryan Yang
February 6, 2004



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600